

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A telecommunications device for processing packet data received over a communications network, wherein the device includes a plurality of data processors, the device comprising:

a plurality of control processors, each control processor configured to manage data routing paths for routing the packet data through data processors in the plurality of data processors to destinations on the network according to the corresponding physical locations of the data processors in the telecommunications device; and

a plurality of logical nodes, wherein each logical node includes one or more data processors in the telecommunications device and is associated with a control processor in the plurality of control processors,

wherein each logical node is associated with a distinct network service provider and routes data for the network service provider using the one or more data processors included in the logical node according to the data routing paths for routing packet data to its destination on the network.

2. (original) The device of claim 1, further comprising a power source configured to power the plurality of logical nodes.

3. (original) The device of claim 1, further comprising a plurality of physical slots, wherein each of the plurality of data processors are coupled to a physical slot in the plurality of physical slots.

4. (original) The device of claim 3, wherein a data path from a first physical slot location to a second physical slot location in the device is mapped to a third physical slot location to a fourth physical slot location.

5. (canceled)

6. (currently amended) A telecommunications shelf for sending packet data to destinations on a communications network, including a plurality of slots configured to connect to data processors, the shelf comprising:

a first logical shelf including a first set of one or more data processors, wherein each data processor in the first set is connected to a first set of one or more slots in the plurality of slots; and

a second logical shelf including a second set of one or more data processors, wherein each data processor in the second set is connected to a second set of one or more slots in the plurality of slots,

a first control processor separate from the first set of data processors configured to manage data routing paths through the first set of data processors according to their corresponding positions in the first logical shelf, and

a second control processor separate from the second set of data processors configured to manage data routing paths through the second set of data processors according to their corresponding positions in the second logical shelf,

wherein the first logical shelf is associated with a first network service provider that transfers data using the first set of one or more data processors and the second logical shelf is associated with a second network service provider that transfers data using the second set of one or more data processors.

7. (canceled)

8. (currently amended) The telecommunications shelf of claim 7, wherein the first control processor is configured to manage data routing paths for the first entity and the second control processor is configured to manage data routing paths for the second entity.

9. (currently amended) The telecommunications shelf of claim 6, wherein the first control processor is configured to map data routing paths based on a physical location of the data processors in the first set of data processors, slots in the telecommunications shelf.

10. (currently amended) The telecommunications shelf of claim 6, wherein the second control processor is configured to map data routing paths based on a physical location of the data processors in the second set of data processors, slots in the telecommunications shelf.

11. (original) The telecommunications shelf of claim 6, further comprising a power source configured to provide power to the first and second set of one or more data planes in the first and second logical shelves.

12. (currently amended) A method for routing packet data over a communication network using a telecommunications device that includes a plurality of data processors, the method comprising:

configuring a first set of one or more data processors in the plurality of data processors for a first logical node in the telecommunications device;

configuring a second set of one or more data processors in the plurality of data processors for a second logical node in the telecommunications device;

managing routing data for the first logical node with a first control processor distinct from the first set of data processors;

managing routing data for the second logical node with a second control processor distinct from the second set of data processors;

receiving data associated with a first network service provider;

routing the data from the telecommunications device to a first destination on the communication network using the one or more data processors in the first logical node;

receiving data associated with a second network service provider; and
routing the data from the telecommunications device to a second destination on
the communication network using the one or more data processors in the second logical node.

13. (previously presented) The method of claim 12, wherein receiving data
associated with the first network service provider comprises receiving data for a first routing data
path from a first location to a second location in the telecommunications device, and further
comprising:

determining a third and fourth location in the telecommunications device in which
to route the received data,

wherein routing the data comprises routing the data from a data processor in the
third location to a data processor in the fourth location, the third and fourth data processors
included in the first set of data processors.

14. (previously presented) The method of claim 13, wherein receiving data
associated with the second network service provider comprises receiving data for a second
routing data path from a fifth location to a sixth location in the telecommunications device, and
further comprising:

determining a seventh and eighth location in the telecommunications device in
which to route the received data,

wherein routing the data comprises routing the data from a data processor in the
seventh location to a data processor in the eighth location, the seventh and eighth data processors
included in the second set of data processors.

15. (canceled)

16. (currently amended) The method of claim ~~15~~ 12, wherein the first control
processor manages data routing paths for the first network service provider and the second
control processor manages data routing paths for the second network service provider.

17. (previously presented) The device of claim 1, wherein the packet data is formatted according to the OC3, OC12, OC48, Ethernet, or Gigabit Ethernet protocols.